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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/627,437	07/25/2003	Peter Deane	NSC1P269/P05569	5227
22434	7590	03/09/2005	EXAMINER	
BEYER WEAVER & THOMAS LLP			PAK, SUNG H	
P.O. BOX 70250			ART UNIT	
OAKLAND, CA 94612-0250			PAPER NUMBER	
			2874	

DATE MAILED: 03/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/627,437	Applicant(s) DEANE, PETER	
	Examiner Sung H. Pak	Art Unit 2874	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☒ Claim(s) 10 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION***Claim Objections***

Claim 10 is objected to because of the following informalities: the claim recites “placing the ferrule in the groove...” however, “the groove” lacks proper antecedent basis. Appropriate correction is required.

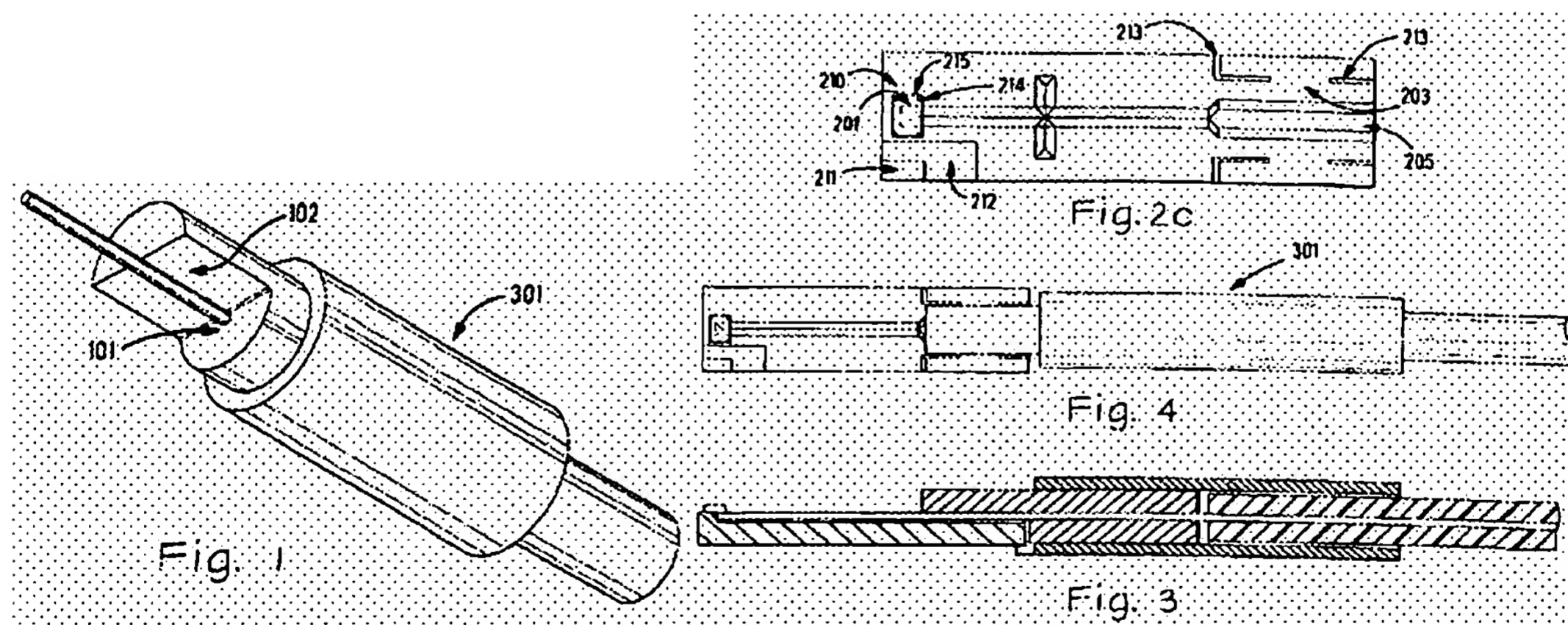
Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-7, 10-15 are rejected under 35 U.S.C. 102(b) as being anticipated by Roff (US 5,764,836).



Roff discloses an optical device with all the limitations set forth in the claims, including: a bench having an optical component (Fig. 2c); a groove formed in the bench, the groove configured to accommodate an optical fiber (Fig. 2c; column 2 lines 48-50); a ferrule, including

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a recess region ('101' Fig. 1) to accommodate the optical fiber when the ferrule is mounted onto the bench, the groove and the ferrule being configured to passively aligning the optical fiber and the optical component on the bench (abstract); wherein the groove comprises a V-groove (column 2 lines 48-50); wherein the ferrule is stepped in shape (Fig. 1); wherein the bench is made from etched silicon (column 4 line 5-12); wherein the device may further comprise a lens formed between the end of the fiber and the optical component (column 5 lines 7-11); wherein the optical component may be an optical receiver (column 4 lines 12-21); wherein the optical component may be an optical transmitter (column 4 lines 21-25).

Regarding claims 10-15, since Roff discloses an optical device with all the limitations set forth in the claims, it inherently teaches the method of assembling such a device comprising the steps of providing optical elements as discussed above.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 8, 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Roff (US 5,764,836) in view of Sasaki et al (US 5,960,141).

Roff discloses an optical device with all the limitations set forth in the claims as discussed above, except it does not explicitly teach the use of a sleeve configured to accommodate the silicon bench and the ferrule, the sleeve further comprising a receptacle

configured to receive a plug-in connector which optically couples a fiber cable or a fiber optic network link.

However, Sasaki reference explicitly teaches an optical transmission terminal device utilizing a sleeve configured to accommodate the silicon bench and the ferrule, the sleeve further comprising a receptacle configured to receive a plug-in connector which optically couples a fiber cable or a fiber optic network link (Fig. 9-10). Such a sleeve element is considered advantageous and desirable in the art because it effectively protects the optical connection between the optical bench and the optical fiber from harsh environmental factors, and it provides a secure and precise connection between the optical fiber and the plug-in connector in a cost-effective manner.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the Roff device to have a sleeve configured to accommodate the silicon bench and the ferrule, the sleeve further comprising a receptacle configured to receive a plug-in connector which optically couples a fiber cable or a fiber optic network link.

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Roff (US 5,764,836) in view of Tabuchi et al (US 5,757,999).

Roff discloses an optical device with all the limitations set forth in the claims as discussed above, except it does not explicitly teach the use of plurality of optical components, lenses, and grooves, wherein each of the grooves are configured to accommodate plurality of optical fibers, wherein the ferrule is configured to accommodate plurality of fiber for passive alignment with the optical components.

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On the other hand, Tabuchi reference explicitly teaches an optical communications device utilizing plurality of optical components, lenses, and grooves, wherein each of the grooves are configured to accommodate plurality of optical fibers, wherein the ferrule is configured to accommodate plurality of fiber for passive alignment with the optical components (Fig. 33; column 30 lines 16-44). Such configuration is considered advantageous and desirable in the art because it allows for simultaneous transmission of plurality of optical signals, increasing the transmission bandwidth and efficiency of the resulting optical communications device.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the Roff device to have plurality of optical components, lenses, and grooves, wherein each of the grooves are configured to accommodate plurality of optical fibers, wherein the ferrule is configured to accommodate plurality of fiber for passive alignment with the optical components.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Yamazaki et al (US 6,599,029 B2), Sasaki (US 6,293,711 B1), and Yamauchi (US 6,550,981 B1) disclose optical transmission modules with stepped ferrules containing optical fibers.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sung H. Pak whose telephone number is (571) 272-2353. The examiner can normally be reached on Monday- Friday, 9AM-5PM.

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The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Sung H. Pak
Examiner
Art Unit 2874

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